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- (8) Monthly production of titanium dioxide for each process line (tons).
- (9) Monthly carbon content factor of petroleum coke (percent by weight expressed as a decimal fraction).
- (10) Whether monthly carbon content of the petroleum coke is based on reports from the supplier or through self measurement using applicable ASTM standard methods.
- (11) Carbon content for carbon-containing waste for each process line (percent by weight expressed as a decimal fraction).
- (12) If carbon content of petroleum coke is based on self measurement, the ASTM standard methods used.
- (13) Sampling analysis results of carbon content of petroleum coke as determined for QA/QC of supplier data under §98.314(d) (percent by weight expressed as a decimal fraction).
- (14) Number of separate chloride process lines located at the facility.
- (15) The number of times in the reporting year that missing data procedures were followed to measure the carbon contents of petroleum coke (number of months); petroleum coke consumption (number of months); carbon-containing waste generated (number of months); and carbon contents of the carbon-containing waste (number of times during year).

[74 FR 56374, Oct. 30, 2009, as amended at 75 FR 66469, Oct. 28, 2010]

§ 98.317 Records that must be retained.

In addition to the records required by §98.3(g), you must retain the records specified in paragraphs (a) and (b) of this section for each titanium dioxide production facility.

- (a) If a CEMS is used to measure CO_2 emissions, then you must retain under this subpart required for the Tier 4 Calculation Methodology in §98.37 and the information listed in this paragraph (a):
- (1) Records of all calcined petroleum coke purchases.
- (2) Annual operating hours for each titanium dioxide process line.
- (b) If a CEMS is not used to measure CO_2 emissions, then you must retain records for the information listed in this paraghraph:

- (1) Records of all calcined petroleum coke purchases (tons).
- (2) Records of all analyses and calculations conducted for all reported data as listed in §98.316(b).
- (3) Sampling analysis results for carbon content of consumed calcined petroleum coke (percent by weight expressed as a decimal fraction).
- (4) Sampling analysis results for the carbon content of carbon containing waste (percent by weight expressed as a decimal fraction), if applicable.
- (5) Monthly production of carbon-containing waste (tons).
- (6) You must document the procedures used to ensure the accuracy of the monthly petroleum coke consumption and quantity of carbon-containing waste measurement including, but not limited to, calibration of weighing equipment and other measurement devices. The estimated accuracy of measurements made with these devices must also be recorded, and the technical basis for these estimates must be provided.
- (7) Annual operating hours for each titanium dioxide process line (hours).

§ 98.318 Definitions.

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

Subpart FF—Underground Coal Mines

SOURCE: 75 FR 39763, July 12, 2010, unless otherwise noted.

§98.320 Definition of the source category.

- (a) This source category consists of active underground coal mines, and any underground mines under development that have operational pre-mining degasification systems. An underground coal mine is a mine at which coal is produced by tunneling into the earth to the coalbed, which is then mined with underground mining equipment such as cutting machines and continuous, longwall, and shortwall mining machines, and transported to the surface. Underground coal mines are categorized as active if any one of the following five conditions apply:
 - (1) Mine development is underway.

- (2) Coal has been produced within the last 90 days.
- (3) Mine personnel are present in the mine workings.
- (4) Mine ventilation fans are operative.
- (5) The mine is designated as an "intermittent" mine by the Mine Safety and Health Administration (MSHA).
- (b) This source category includes the following:
- (1) Each ventilation system shaft or vent hole, including both those points where mine ventilation air is emitted and those where it is sold, used onsite, or otherwise destroyed (including by ventilation air methane (VAM) oxidizers).
- (2) Each degasification system well or gob gas vent hole, including degasification systems deployed before, during, or after mining operations are conducted in a mine area. This includes both those wells and vent holes where coal bed gas is emitted, and those where the gas is sold, used onsite, or otherwise destroyed (including by flaring).
- (c) This source category does not include abandoned or closed mines, surface coal mines, or post-coal mining activities (e.g., storage or transportation of coal).

[74 FR 56374, Oct. 30, 2009, as amended at 78 FR 71966, Nov. 29, 2013]

§98.321 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains an active underground coal mine and the facility meets the requirements of §98.2(a)(1).

§98.322 GHGs to report.

- (a) You must report CH_4 liberated from ventilation and degasification systems.
- (b) You must report CH₄ destruction from systems where gas is sold, used

- onsite, or otherwise destroyed (including by VAM oxidation and by flaring).
- (c) You must report net CH₄ emissions from ventilation and degasification systems.
- (d) You must report under this subpart the CO_2 emissions from coal mine gas CH_4 destruction occurring at the facility, where the gas is not a fuel input for energy generation or use (e.g., flaring and VAM oxidation).
- (e) You must report under subpart C of this part (General Stationary Fuel Combustion Sources) the CO_2 , CH_4 , and N_2O emissions from each stationary fuel combustion unit by following the requirements of subpart C. Report emissions from both the combustion of collected coal mine CH_4 and any other fuels.
- (f) An underground coal mine that is subject to this part because emissions from source categories described in Tables A-3, A-4 or A-5 of subpart A of this part, or from stationary combustion (subpart C of this part), is not required to report emissions under this subpart unless the coal mine liberates 36,500,000 actual cubic feet (acf) or more of methane per year from its ventilation system

[75 FR 39763, July 12, 2010, as amended at 76 FR 73901, Nov. 29, 2011; 78 FR 71966, Nov. 29, 2013]

§98.323 Calculating GHG emissions.

(a) For each ventilation shaft, vent hole, or centralized point into which $\mathrm{CH_4}$ from multiple shafts and/or vent holes are collected, you must calculate the quarterly $\mathrm{CH_4}$ liberated from the ventilation system using Equation FF-1 of this section. You must measure $\mathrm{CH_4}$ content, flow rate, temperature, pressure, and moisture content of the gas using the procedures outlined in $\S 98.324$.

$$CH_{4V} = n * \left(V * MCF * \frac{C}{100\%} * 0.0423 * \frac{520^{\circ}R}{T} * \frac{P}{1 \text{ atm}} * 1,440 * \frac{0.454}{1,000}\right)$$
 (Eq. FF-1)

Where:

 $CH_{4V} = Quarterly CH_4$ liberated from a ventilation monitoring point (metric tons CH_4).